IN THE CLAIMS:

Please amend claims 1-7 as follows.

1. (Currently Amended) A method for providing a data symbol having a first quadrature compensated data symbol (FQCDS), a second quadrature compensated data symbol (SQCDS), a first in-phase compensated data symbol (FICDS) and a second in-phase compensated data symbol (SICDS) to an inverse fast fourrier transform (IFFT) of a multicarrier quadrature modulator having an amplifier, wherein a first subcarrier data symbol and a second subcarrier data symbol are available from a mapper and an alpha, an epsilon, and a gain are predetermined, the alpha, epsilon and gain being imbalance parameters, comprising the steps of:

first quadrature compensating the data symbol based on the alpha, epsilon and gain to produce ~~a~~ the FQCDS;

second quadrature compensating the data symbol based on the alpha, epsilon and gain to produce ~~a~~ the SQCDS;

first in-phase compensating the data symbol based on the alpha, epsilon and gain to produce ~~a~~ the FICDS; and

second in-phase compensating the data symbol based on the alpha, epsilon and gain to produce ~~a~~ the SICDS.

2. (Currently Amended) A method for providing a first quadrature compensated data symbol (FQCDS), a second quadrature compensated data symbol (SQCDS), a first

in-phase compensated data symbol (FICDS) and a second in-phase compensated data symbol (SICDS) to an inverse fast fourrier transform (IFFT) of a multicarrier quadrature modulator having an amplifier, wherein at least four transmitted symbols ~~symbol~~ are available from the amplifier and at least four data symbols and a next data symbol are available from a mapper, comprising the steps of:

a) calculating the energy of the at least four transmitted symbols;

b) calculating an ~~a~~ alpha, an epsilon and a gain based on the energy of the at least four transmitted symbols and the at least four data symbols, wherein the alpha, epsilon and gain are imbalance parameters;

c) storing the alpha, epsilon and gain;

d) first quadrature compensating the next data symbol first quadrature subcarrier based on the alpha, epsilon and gain to produce ~~a~~ the FQCDS;

e) second quadrature compensating the next data symbol second quadrature subcarrier based on the alpha, epsilon and gain to produce ~~a~~ the SQCDS;

f) first in-phase compensating the next data symbol first in-phase subcarrier based on the alpha, epsilon and gain to produce ~~a~~ the FICDS;

g) second in-phase compensating the next data symbol second in-phase subcarrier based on the alpha, epsilon and gain to produce ~~a~~ the SICDS;

h) repeating steps a, b and c wherein the at least four transmitted symbols include the next transmitted data symbol and the at least four data symbols include the next data symbol.

3. (Currently Amended) The method of claim 2 wherein the step of calculating ~~a~~ the alpha, epsilon and gain further comprises the steps ~~step~~ of:

calculating a first alpha, a first epsilon and a first gain based on the energy of the at least ~~for~~ four transmitted symbols;

calculating a second alpha, a second epsilon and a second gain based on the energy of the next data symbol;

calculating ~~a~~ the alpha based on ~~a~~ an average of the first alpha and the second alpha;

calculating ~~a~~ the epsilon based on ~~a~~ an average of the first epsilon and the second epsilon; and

calculating ~~a~~ the gain based on ~~a~~ an average of the first gain and the second gain.

4. (Original) The method of claim 2 wherein the step of calculating the energy of at least four transmitted symbols further comprises the steps of:

a) sampling output of a transmitter to provide a sampled signal;

b) sampling the sampled signal to provide a square sample signal; and

c) integrating the squared sample signal over a symbol duration.

5. (Currently Amended) An apparatus for providing a first quadrature compensated data symbol (FQCDS), a second quadrature compensated data symbol (SQCDS), a first in-phase compensated data symbol (FICDS) and a second in-phase compensated data symbol (SICDS) to an inverse fast fourrier transform (IFFT) of a

multicarrier quadrature modulator having an amplifier, wherein at least four transmitted symbols ~~symbol~~ are available from the amplifier and at least four data symbols and a next data symbol are available from a mapper comprising:

a) means for calculating the energy of the at least four transmitted symbols;

b) means for calculating an ~~a~~ alpha, an epsilon and a gain based on the energy of the at least four transmitted symbols and the at least four data symbols, wherein the alpha, epsilon and gain are imbalance parameters;

A3 cont.

c) means for storing the alpha, epsilon and gain;

d) means for first quadrature compensating the next data symbol first quadrature subcarrier based on the alpha, epsilon and gain to produce ~~a~~ the FQCDS;

e) means for second quadrature compensating the next data symbol second quadrature subcarrier based on the alpha, epsilon and gain to produce ~~a~~ the SQCDS;

f) means for first in-phase compensating the next data symbol first in-phase subcarrier based on the alpha, epsilon and gain to produce ~~a~~ the FICDS;

g) means for second in-phase compensating the next data symbol second in-phase subcarrier based on the alpha, epsilon and gain to produce ~~a~~ the SICDS;

h) means for repeating implementation of a, b and c wherein the at least four transmitted symbols include the next transmitted data symbol and the at least four data symbols include the next data symbol.

6. (Currently Amended) The apparatus of claim 5 wherein the means for calculating ~~a~~ the alpha, epsilon and gain further comprises:

means for calculating a first alpha, a first epsilon and a first gain based on the energy of the at least ~~for~~ four transmitted symbols;

means for calculating a second alpha, a second epsilon and a second gain based on the energy of the next data symbol;

means for calculating ~~a~~ the alpha based on ~~a~~ an average of the first alpha and the second alpha;

means for calculating ~~a~~ the epsilon based on ~~a~~ an average of the first epsilon and the second epsilon; and

means for calculating ~~a~~ the gain based on ~~a~~ an average of the first gain and the second gain.

7. (Original) The apparatus of claim 5 wherein the means for calculating the energy of at least four transmitted symbols further comprises:

a) means for sampling output of a transmitter to provide a sampled signal;

b) means for sampling the sampled signal to provide a square sample signal; and

c) means for integrating the squared sample signal over a symbol duration.